

### Existing Conditions

The floodplain analysis is based on published Federal Emergency Management Agency (FEMA) mapping. Campbell Creek and Tina Lake both have mapped floodplains (FEMA 2004). Any work within floodplains, as identified by the FEMA maps, requires project review and approval to ensure potential impacts on floodways are adequately considered (Puff 2005). The mapped flood zones for Campbell Creek and Tina Lake are shown in Figure 3.6.

The existing Campbell Creek bridge encroaches on the 100-year floodplain. The encroachment contributes to the flood hazard on Campbell Creek. The bridge constricts the water flow during high-flow events and can worsen the upstream flooding.

### Environmental Consequences

Executive Order 11988, “Floodplain Management,” and implementing U.S. Department of Transportation (USDOT) Order 5650.2, “Floodplain Management and Protection,” establish federal policy for the protection of floodplains and floodways. The intent of these regulations is to avoid adverse impacts to floodplains, to reduce flood risks related to property loss and hazard to life, and to discourage land use development that is incompatible with natural and beneficial floodplain values. Where avoidance is not practicable, these policies require appropriate consideration of methods to minimize adverse impacts.

The No Action Alternative would keep the existing low bridge over Campbell Creek. The existing bridge is located in the floodplain and acts as a constriction during high-flow events. The constricted water can back up and cause upstream flooding that would not occur if the bridge had a larger opening.

The Proposed Action would require construction within the 100-year floodplains of Campbell Creek

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#### What is a 100-year floodplain?

The 100-year floodplain is the area that would be inundated by a flood with a 1 percent chance of occurring in any given year.

The 100-year floodplain is sometime referred to as the base-year floodplain.

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# West Dowling Road Connection Project

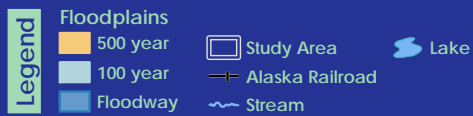
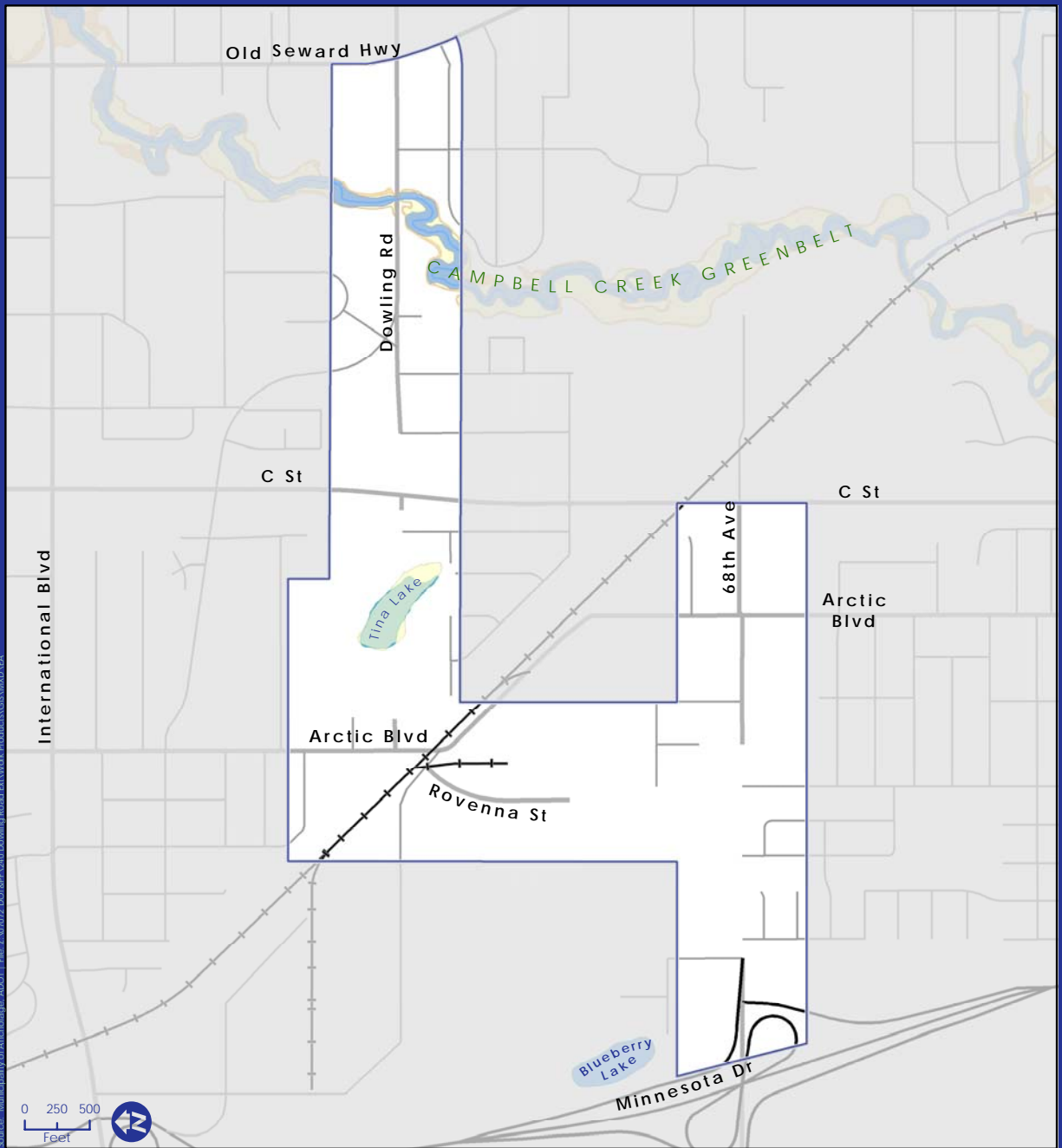


Figure 3.6  
Floodplains

and Tina Lake. Complete avoidance of either floodplain is not practicable because it would substantially increase project costs (by approximately \$6.5 million). **The increased costs are the result of needing to construct a longer bridge.**

Flood modeling shows that a clear-span bridge with an opening of 89 feet would be sufficient for passage of the 100-year flow of Campbell Creek without impacts. The replacement bridge would exceed the requirement for passing the predicted 100-year flood. An MOA requirement is that any development within the regulatory floodway must not result in any increase in flood levels during the occurrence of a base (100-year) flood.

The proposed 100-foot-long Campbell Creek bridge would span most of the 100-year floodplain and reduce the floodplain encroachment. The bridge would not result in an increase in flood levels. In fact, the replacement bridge should result in a decrease in flood levels.

The bridge would require filling approximately 0.23 acre of floodplain. The realigned Campbell Creek Trail and trail connections affect an additional 0.11 acre of 100-year floodplain. **The impacted area of the floodplain is not wetlands.** Parks and pathways are allowed uses in the floodway. Figure 3.7 shows the floodplain impacts to the Campbell Creek floodplain.

The Proposed Action also would require construction within the Tina Lake floodplain. The Proposed Action would not result in any increase in the flood levels during the 100-year flood around Tina Lake. Floodplain impacts to Tina Lake are shown in Figure 3.8. Table 3.1 summarizes floodplain impacts.

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According to Anchorage Municipal Code 21.60.030, a regulatory floodway is the channel of a river or other watercourse and the adjacent land areas that must be reserved to discharge the base flood without cumulatively increasing the water surface elevation more than 1 foot.

The regulatory floodway includes all lands within the 100-year floodplain.

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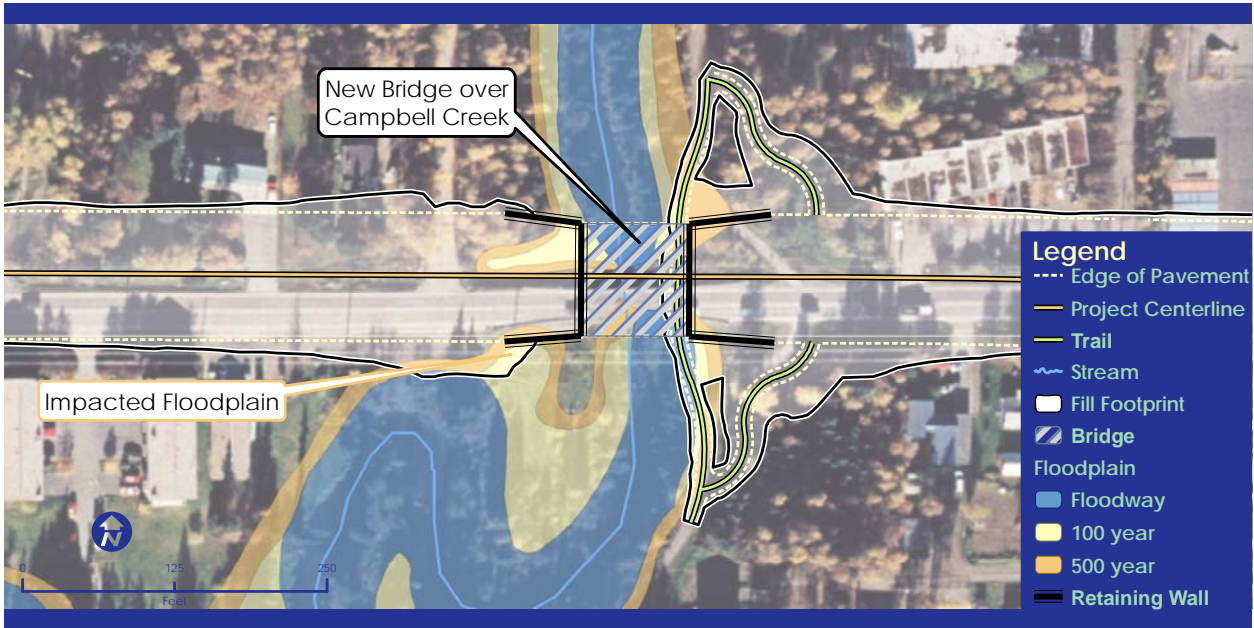


Figure 3.7 Impacts to the Campbell Creek Floodplain

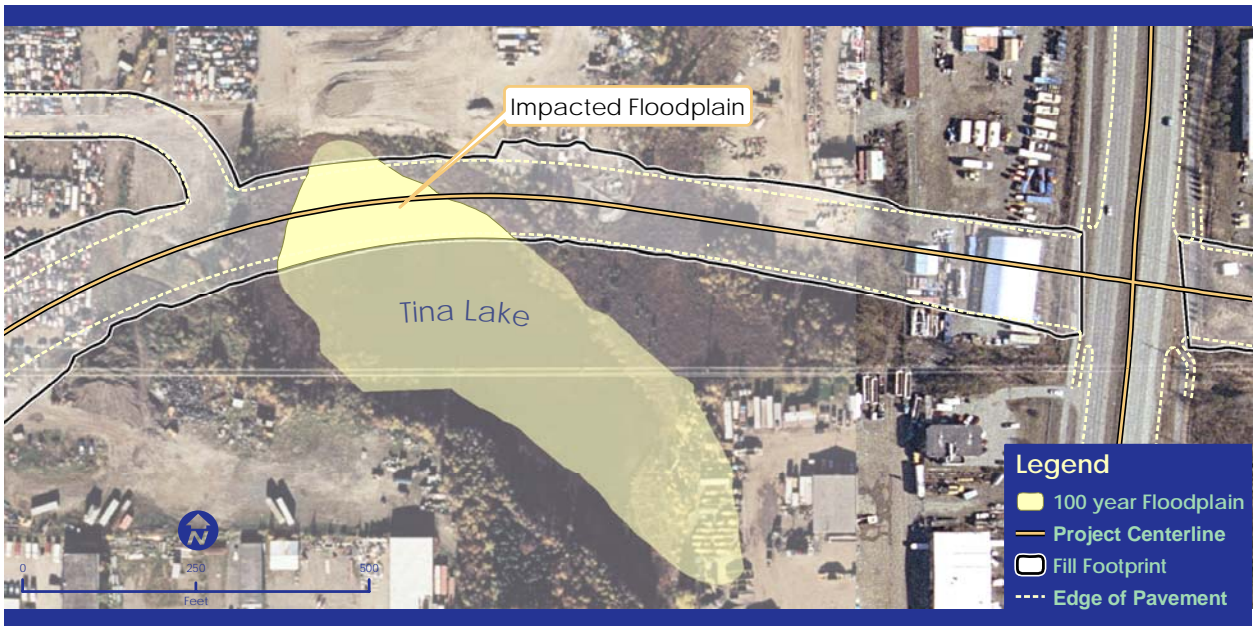


Figure 3.8 Impacts to the Tina Lake Floodplain

Table 3.1. Floodplain Impacts

Floodplain		Acres Affected
Tina Lake 100-year Floodplain		0.66
Campbell Creek 100-year floodplain	Road impacts	0.23
	Trail impacts	0.11
<b>Total</b>		<b>1.00</b>

## Construction

No construction impacts are anticipated.

## Mitigation and Authorizations

No occupied structure or building is proposed in the floodplain; therefore, the potential for increased risk of damage to buildings or loss of human life is not anticipated.

The Proposed Action would conform to applicable state and local floodplain standards.

This project is not expected to promote future incompatible floodplain development or increase potential for flood-related property damage or human life.

Work within the 100-year floodplain has been minimized to comply with Executive Order 11988.

The bridge crossing Campbell Creek would be designed to comply with MOA regulations, and would not raise the backwater surface elevation by more than 1 foot. The bridge would improve flood passage compared to the existing bridge.

Construction of any structure or placement of fill in a mapped floodplain in Anchorage requires a permit from the MOA Flood Hazard Administrator. DOT&PF will comply with permit stipulations.

Mitigation for impacts to natural floodplain values can be found in the water quality, wetlands, fish and essential fish habitat, wildlife, and water bodies sections of this EA.